

CLAIMS

1. A multilayer substrate with a built-in chip-type electronic component comprising;

    a laminate formed by laminating a plurality of dielectric layers,

    a chip-type electronic component buried in the laminate and having a terminal electrode, and

    a via conductor formed in the dielectric layers in the lamination direction,

    wherein the terminal electrode of the chip-type electronic component is connected to at least one of the upper and lower end surfaces of the via conductor, and a connection step is formed in the via conductor.

2. The multilayer substrate with the built-in chip-type electronic component according to claim 1, wherein the dielectric layers are ceramic layers, the laminate is a ceramic laminate including a plurality of the ceramic layers, and the chip-type electronic component includes a ceramic sintered body used as an element body.

3. The multilayer substrate with the built-in chip-type electronic component according to claim 2, wherein the ceramic layers are composed of a low-temperature co-fired ceramic material, and the via conductor is composed of a conductor material containing silver or copper as a main constituent.

4. A method for manufacturing a multilayer substrate with a built-in chip-type electronic component comprising the steps of:

    disposing a chip-type electronic component having a terminal electrode on a dielectric layer having a via conductor so that

the terminal electrode is connected to the via conductor; and laminating the dielectric layer having the chip-type electronic component disposed thereon and another dielectric layer to form a laminate having the built-in chip-type electronic component.

5. The method for manufacturing the multilayer substrate with the built-in chip-type electronic component according to claim 4, wherein each of the dielectric layers includes a ceramic green body, the chip-type electronic component includes a ceramic sintered body used as an element body, and the ceramic green body having the chip-type electronic component disposed thereon and the other ceramic green body are laminated to form a ceramic green laminate having the built-in chip-type electronic component, followed by firing of the ceramic green laminate.

6. The method for manufacturing the multilayer substrate with the built-in chip-type electronic component according to claim 5, wherein the other ceramic green body has a via conductor to be connected to the terminal electrode of the chip-type electronic component.

7. The method for manufacturing the multilayer substrate with the built-in chip-type electronic component according to claim 5 or 6 further comprising the steps of:

forming the ceramic green bodies using a low-temperature co-fired ceramic material; and

forming a conductor pattern composed of silver or copper as a main constituent in the ceramic green laminate.

8. The method for manufacturing the multilayer substrate with the built-in chip-type electronic component according to any one

of claims 5 to 7 further comprising the step of adding a shrinkage suppression layer composed of a hardly sinterable powder, which is not substantially sintered at the sintering temperature of the ceramic green bodies, in the ceramic green laminate or on a surface thereof.